

In the Claims:

Please amend the Claims to read as follows (a copy of the amended claims showing the additions and deletions appears at the end for the Examiner's convenience):

Sub B' 4/ A method according to claim 2, characterized in that the unidirectional sheets are bonded to one another by knitting a thread which passes from one side of the fabric to the other.

A1 5/ A method according to claim 2, characterized in that the unidirectional sheets are bonded together by needling.

6/ A method according to claim 2, characterized in that the unidirectional sheets are bonded together by stitching with a thread that passes from one side of the fabric to the other.

7/ A method according to claim 2, characterized in that the plies are superposed by being mutually angularly offset around an axis passing through the bottom of the bowl.

9/ A method according to claim 1, characterized in that plies are used formed of carbon fiber yarns that are free of surface functions.

10/ A method according to claim 1, characterized in that plies are used formed of carbon fiber yarns provided with an interphase coating of pyrolytic carbon.

11/ A method according to claim 1, characterized in that the superposed plies are bonded together by needling so as to transfer fibers taken from the plies transversely thereto.

13/ A method according to claim 11, characterized in that the density of fibers transferred transversely relative to the plies is controlled throughout the thickness of the preform.

14/ A method according to claim 1, characterized in that the superposed plies are bonded together by stitching.

15/ A method according to claim 1, characterized in that the superposed plies are bonded together by implanting threads transversely relative to the plies.

16/ A method according to claim 1, characterized in that the preform is consolidated prior to densification.

18/ A method according to claim 1, characterized in that, prior to densification, the preform is subjected to heat treatment for dimensional stabilization and for purification at a temperature lying in the range 1600°C to 2800°C.

19/ A method according to claim 1, characterized in that the preform is densified by chemical vapor infiltration.

20/ A method according to claim 1, characterized in that the deformable two-dimensional fiber plies used are whole, being free from any cutouts or slots, thereby obtaining a preform for a complete bowl in one piece, and densification is performed on the complete bowl preform.

21/ A method according to claim 1, characterized in that the deformable two-dimensional fiber plies used are whole, being free from cutouts or slots, so as to obtain a complete one-piece bowl preform, a hole is made through the bottom of the preform prior to densification of the preform by chemical vapor infiltration, and the hole is subsequently closed by a plug.

22/ A method according to claim 1, characterized in that the deformable two-dimensional fiber plies used are whole, having a

substantially central opening, the plies are superposed on the former so that their openings are in alignment, thereby obtaining a bowl preform with a hole through the bottom of the preform constituted by the aligned openings in the plies, the preform is densified by chemical vapor infiltration, and the hole is subsequently closed by a plug.

23/ A method according to claim 21, characterized in that a plug of thermostructural composite material is used.

24/ A method according to claim 21, characterized in that an additional step of chemical vapor infiltration is performed after the plug has been put into place in the hole formed in the bottom of the preform.

25/ A method according to claim 1, characterized in that after densification, purification heat treatment is performed at a temperature lying in the range 1600°C to 2700°C.

26/ A method according to claim 1, characterized in that after densification, a coating of pyrolytic carbon is formed on the bowl.

27/ A method according to claim 1, characterized in that after densification, a coating of silicon carbide is formed on the bowl.

28/ A method according to claim 21, characterized in that the inside face of the bowl is lined with a protective coating.

32/ A bowl according to claim 30, characterized in that the fiber plies are formed of unidirectional sheets superposed in different directions.

35/ A bowl according to claim 33, characterized in that the matrix is made at least in part out of ceramic.

37/ A bowl according to claim 30, characterized in that at least its inside face is coated in a layer of pyrolytic carbon.

38/ A bowl according to claim 30, characterized in that at least its inside face is coated in a layer of silicon carbide.

39/ The use of a bowl according to claim 30 for supporting a crucible in an installation for producing monocrystalline

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silicon ingots, the use being characterized in that a protective layer is interposed between the bowl and the crucible.

Please add the following new claims 41-54:

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41/ A method according to claim 3, characterized in that the unidirectional sheets are bonded to one another by knitting a thread which passes from one side of the fabric to the other.

42/ A method according to claim 3, characterized in that the unidirectional sheets are bonded together by needling.

43/ A method according to claim 3, characterized in that the unidirectional sheets are bonded together by stitching with a thread that passes from one side of the fabric to the other.

44/ A method according to claim 12, characterized in that the density of fibers transferred transversely relative to the plies is controlled throughout the thickness of the preform.

45/ A method according to claim 22, characterized in that a plug of thermostructural composite material is used.

46/ A bowl according to claim 31, characterized in that the fiber plies are formed of unidirectional sheets superposed in different directions.

47/ A bowl according to claim 34, characterized in that the matrix is made at least in part out of ceramic.

48/ A method according to claim 3, characterized in that:

the unidirectional sheets are bonded to one another by one of knitting a thread which passes from one side of the fabric to the other, by needling, or by stitching with a thread that passes from one side of the fabric to the other; and

the plies are superposed by being mutually angularly offset around an axis passing through the bottom of the bowl.

49/ A method according to claim 48, characterized in that the superposed plies are bonded together by needling so as to either transfer fibers taken from the plies transversely thereto or with each newly draped ply needled onto the underlying structure; and

the density of fibers transferred transversely relative to the plies is controlled throughout the thickness of the preform.

50/ A method according to claim 48, characterized in that:

the preform is consolidated prior to densification;

the preform is consolidated by being impregnated with a resin, by polymerizing the resin, and by carbonizing the polymerized resin;

prior to densification, the preform is subjected to heat treatment for dimensional stabilization and for purification at a temperature lying in the range 1600°C to 2800°C;

the preform is densified by chemical vapor infiltration; and

the deformable two-dimensional fiber plies used are whole, being free from any cutouts or slots, thereby obtaining a preform for a complete bowl in one piece, and densification is performed on the complete bowl preform.

51/ A method according to claim 50, characterized in that either the deformable two-dimensional fiber plies used are whole, being free from cutouts or slots, so as to obtain a complete one-piece bowl preform, a hole is made through the bottom of the preform prior to densification of the preform by chemical vapor infiltration, and the hole is subsequently closed by a plug.



52/ A method according to claim 50, characterized in that the deformable two-dimensional fiber plies used are whole, having a substantially central opening, the plies are superposed on the former so that their openings are in alignment, thereby obtaining a bowl preform with a hole through the bottom of the preform constituted by the aligned openings in the plies, the preform is densified by chemical vapor infiltration, and the hole is subsequently closed by a plug;

a plug of thermostructural composite material is used;

an additional step of chemical vapor infiltration is performed after the plug has been put into place in the hole formed in the bottom of the preform;

after densification, purification heat treatment is performed at a temperature lying in the range 1600°C to 2700°C;

after densification, a coating of pyrolytic carbon or silicon carbide is formed on the bowl;

the inside face of the bowl is lined with a protective coating; and

a protective coating is used made of a thermostructural composite material.